77. Standardized Application System, first stage

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Probabilidad Imposible: Standardized Application System, first stage

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What I will develop is the first stage, as a global database of instructions, of the third step, in the third stage, in the third phase, the global database of instructions in the first model of global Application System as an outer instructions application sub-system.

The database of instructions in the standardised Application System, as an outer sub-system, is formed by all the instructions filed in this database, filed by the previous step, the standardised Decisional System, which previously has transformed the decisions authorised in the mathematical projects into a range of instructions.

The way the third stage of the Decision System transformed decisions into a range of instructions is by analysing the mathematical factors and operations in an equation, transforming the mathematical operations into robotic functions. Every robotic function is considered as one instruction, so an instruction is, in fact, a robotic function.

If the curve of temperature in a city predicts that the temperature by night goes down, according to this prediction the thermostat of a building could make the decision to warm the building to keep a moderate temperatura at night, the way to put this decision into practice is transforming this decision into robotic functions, in this case all the robotic functions necessary to turn on the heaters of the building as well as the possibility to close all the doors and windows, and any other robotic function oriented to protect the building against very low temperatures.

If a robot in Mars can be exposed to extremely high or low temperatures, able to damage the robotic systems, according to the possible prediction of extreme temperatures, according to the curve of environmental temperature the robot could make decisions to keep its internal temperature constant to avoid damages in its systems, like turning on internal heaters or internal ventilation systems. The way to make this decision is: according to the curve of environmental temperature, what decisions are necessary to keep a moderate temperature within, and according to these decisions, to send

instructions (robotic functions) to those devices within the robotic system to keep the temperature moderate.

If an industry predict, according to the curve of demand, an increase of the demand of some product, for instance an increase of the demand of heaters in winter, or air conditioning in summer, according to this curve the Specific Artificial Intelligence could make decisions about how to reduce or increase the production of goods according to the curve of the demand, adapting the curve o production to the curve of demand, and according to the curve of production making all the necessary decisions, decisions to transform later on into robotic functions for the increase or reduction of the production, according to the curve of production, according to the curve of the demand.

The method to automatize an industry is comparable to a thermostat, the only difference is the more complexity in the Decisional System, the only decision that a thermostat does is to turn on or off the heater or the air conditioning, an specific Decisional System in an industry needs a more sophisticated Modelling and Decisional Systems as to graduate the volume of production to the curve of the demand previously predicted.

But the Specific Artificial Intelligence by Deduction of an industry belongs to the first phase, now in the third phase what we need is to standardize all, or almost all, the Specific Artificial Intelligences by Deduction, in order to be transformed in specific programs working altogether within the Artificial Research by Deduction in the Global Artificial Intelligence as global program, making decisions the global program at global level, and making decisions the specific programs at specific level, getting ready everything for upcoming superior phases.

In the third phase is not enough to think about how the Specific Industrial System of an industry by Deduction works like a thermostat, but, how all the Specific Artificial Intelligences by Deduction, now transformed into specific programs, can work together.

For instance, how to model and project not only the increase of the production of goods, but the increase of the production of all the material resources necessary for that industry when it is predicted an increase in the production of goods, the increase of the means of transport to carry all the material resources to that industry, the automation of the production of goods, and all the decisions related to transport and delivery of these

goods from the industry to the shops or the house of the customers by drones or any other automatic delivery system, like drive less vehicles or lorries.

The automation of a thermostat, the automation of the production of thermostats, and the automation of the delivery system of thermostats, all these automation processes are identical; the only difference is the increased complexity in the Modelling System and the Decision System.

The Modelling System and the Decision System in a singular thermostat is more simple that the Decision System in an automatic industry producing thermostats, and the Decisional System in an automatic industry producing thermostats is more simple that the full automation of the whole industrial process, from the production to the delivery of material resources to the industry, the automation of the inputs and outputs, to the production and delivery of the final product, thermostats.

At the end it is not only about the automation of the chain production of an industry, but the automation of the whole process, the automation of the production and delivery of inputs, the automation of the production and delivery of industrial products, and the automation of the production and delivery of outputs, the reception of the product at home by the customer.

But the same automation process, is not only for the automation of the industrial process, but for the automation of the whole economy, even the automation of the finance sector: if a broker at Wall Street or the London stock exchange, the only thing that he does is to make estimations about how much cost the shares of a company, how these shares are going up in the future, and the prediction of benefits when selling the shares, the whole process made by a human in the stock market as a mathematical psychological process based on calculus, could be done even much better by an Artificial Intelligence.

If all processes in a bank can be reduced to mathematical processes of calculus, having as main objective to get more benefits, all these psychological processes of calculus done by humans could be completely automated, being done, and even much better with less margin of error, by Artificial Intelligence.

But this process of automation does not end here; it goes further. if the possibility of the full automation of the economy is possible, this automation process could be brought to other human activities, like the global transport system, medicine, the reduction of global warming or even education.

As long as the complexity in the automation process is growing, from the thermostat, the automation of the thermostats production, the automation of the whole process of production of delivery of resources and products, this growing complexity demands the Decisional System must be able to make decisions in more than one specific science, discipline, activity, what means that the Modelling System and the Decisional System must go beyond the Specific Artificial Intelligence, towards a global Modelling System and global Decisional System for a Global Artificial Intelligence to make decisions involving at the same time even in the same decisión instructions for different sciences, disciplines, activities.

This growing complexity in the global Modelling System and Decisional System, whose first models will be the standardized Modelling System and standardized Decisional System, demands more complex mathematical models and projects, so a more complex plan, where to synthesized more and different single models and projects coming from different sciences, disciplines, and activities, more complex decisions which are later transformed into instructions in the third stage of the global Decisional System.

The only difference between the specific Decisional System and the global Decisional System is the fact that the specific Decisional System is going to transform only decisions of an specific science, or specific discipline, or specific activity, into instructions of that specific science, specific discipline, or specific activity, while the global Decisional System can transform a decision into a instructions whose robotic functions belong to different sciences, different disciplines, different activities.

If a global Decisional System must transform the decision to increase the production of thermostats in winter, this decision could imply the transformation of this decision into instructions whose robotic functions can be orders for robotic devices working not only in the industrial chain, but in the production of material resources, the transport of these resources, and the delivery of products to the final client, shops or particular customers.

This means that a decision made in a global system can englobe instructions from different fields that will need mechanisms to ensure that robotic functions (instructions) in which a decision has been transformed, is right, ensuring that the transformation of a decision into robotic functions is done correctly, and it will need a more complex organization in the database of instructions as first stage in the Application System as outer instructions application sub-system.

For ensuring that the transformation of a decision into robotic functions is done correctly, within the seven rational critiques to be carried out by the Learning System, the fourth robotic rational critique, the fourth rational critique, will criticize that the frequency of mistakes by robotic function not due to external factors, so due to internal (psychological) factors is within a margin of error, otherwise, if the empirical probability of errors is equal to or greater than a critical reason, the Learning System should analyse what in common have all these internal errors in that robotic function, to determine how to fix the assignation of this mathematical operation to this robotic function, fixing or adapting the robotic device to this function, or ordering to the Artificial Engineering the construction of robotic devices for these robotic functions. But this process of criticising, analysis, and orders to the Artificial Engineering (as an inner sub-system) according to the results in the rational critiques, or any other process in the Learning System, belongs to the Learning System itself.

In addition to ensure that a decision is transformed correctly into the right robotic functions (instructions) through the fourth rational critique (carried out by the Learning System within the rest of rational critiques), is necessary that the organization of the database of instructions in the first stage of the Application System as outer instructions application sub-system, is an organization keeping the principle of harmony with the rest of databases in the Global Artificial Intelligence, very especially keeping the harmony between the database of instructions in the Application System as outer instructions application sub-system, and the database of technologies (programs, applications, robotic devices) already working for the Global Artificial Intelligence, technological database as first stage in the Artificial Engineer as inner instructions application sub-system, if both databases, the database of instructions and the database of technologies, are organized keeping the same principles, especially regarding to: sub-factoring level (position), and sub-section (encyclopedic organization per sub-factor); later on when matching instructions to robotic devices in the second stage of the Application System as outer sub-system, the attribution of instructions to devices is the process to compare, in the same position and section of an instruction in the database of instructions, what robotic devices are in this same position and section in the technological database, and according to the robotic function of this instruction, what

device in this position and section has within its capabilities this robotic function, to carry out this instruction in that position and section.

But in order to make possible the attribution of instructions to robotic devices in the second stage of the Application System as outer sub-system, firstly is necessary to ensure that both databases in the first stages in their corresponding sub-systems are organised, keeping at least both of them with the same principles of position and subject.

In addition to position and subject, the database of instructions must organise the instruction within the right position and subject, according to priority, time and order nth. These three last ones criteria is not related to the attributional process, but once the second stage of the outer sub-system has attributed every robotic function to its right robotic device, according to position and encyclopedic section, the robotic device is going to carry out the instructions according to priority, when (time), and the nth order of an instruction within its range of instructions, ensuring that the nth instruction immediately before has been completed (in this or any other robotic device) in order to start the completion of an instruction.

For the attributional process in the second stage of the outer sub-system, the organisation of the database of instructions in the first stage of the outer sub-system is very important, to match every instruction of every position as an encyclopedic subject to the right robotic device working in that position on that subject. And the organization of the database of instructions, within the right position and subject, according to priority, time, order, once the instruction is sent to the right device in the second stage of the outer sub-system, the robotic device will apply the instruction according to that priority in the right time and order.

Another reason for the organisation of the database of instructions according to position, subject, priority, time, and order is because of the first rational supervision.

Along the global Application System as a global outer instructions application sub-system, is carried out the seven rational supervisions, to ensure the absence of contradictions between the instructions, and the absence of fourth rational contradictions in the first rational supervision, or fourth and fifth rational contradictions in the rest of the rational supervisions.

The fourth rational contradiction is the contradiction which is going to study the fourth rational critique, the contradiction between the mathematical operation behind a decisión and the robotic function assigned, if the attribution of a robotic function (instruction) is right according to the purpose of that decision: the absence of error in the attributional process of robotic functions to decisions.

In addition to the fourth rational critique is necessary to track any fourth rational contradiction at any level in any supervision. If the Learning System only is able to identify rational contradictions in a large sample of attributions as to say that a sufficient sample of contradictions is due to psychological processes, so as to be fixed sending the right amendments to that technology to the Artificial Engineer as inner sub-system, after analysing what is wrong in that attribution, due to this long process needs a large sample of attributions as to make a rational decision, there is a possibility that in the first rational supervision the Application System could identify in the analysis of instructions in the database errors due to the fourth contradiction.

The first rational supervision in the database of instructions as first stage of database in the Application System as outer sub-system, should work as follow, as soon an instruction has been filed in the right sub-factoring level and sub-section in the database of instructions, filing the instruction in that position and subject according to priority, time, nth order that the instruction has in its range of instructions, then the first rational supervision should be able to analyse:

- The first rational supervision must analyse that the instruction, according to where and over what, position and subject, the robotic instruction must be applied, has been filed correctly by the Decisional System in the right sub-factoring level, and within the sub-factoring level, in the right sub-section.

- The first rational supervision must analyse that there is no contradiction between the purpose of an instruction according to its nth order, and the purpose of the rest of robotic functions within the same range of instructions in which this nth order has been assigned to every one of them. If there is a contradiction in the purpose of an instruction according to its nth in relation to the rest of instructions belonging to same range of instructions, this contradiction in the purpose of this instruction could be due to a fourth rational contradiction (for instance, the first rational supervision analysing the nth order of an instruction, finds out that an instruction has been filed in the banking system, when the previous nth instruction, and the next nth instruction, belong to the production of

thermostats, is evident that there is a contradiction in the purpose of these instructions) or only an error in the assignation of the nth number of an instruction (an instruction for the delivery of thermostats has been mixed with the instructions in the chain production of thermostats). In any case, even the error in the assignation of the nth number of an instruction within the fourth rational critique is going to be considered as a fourth rational contradiction, because if the frequency of assignation of the nth number to a robotic function, even if that robotic function corresponds to that decision, but not in that nth number, this means that the repetition of this mistake in a sufficient sample of attributions of this robotic function to this decision, is a psychological error not due to external factors to be fixed, sending the project to the Artificial Engineer as inner sub-system to fix this problem before approval by the Decisional System. When finding contradictions, the rational supervisions are not going to make decisions about how to fix a technology, the only thing that it does is to send the instruction to the source, if there is enough time, but foreseeing an imminent impact not having time to wait for a new instruction from the source if the instruction is back to the source, then the Application System as outer sub-system has to make an extreme instruction, making only rational supervisions, or not having even time for supervisions, too late even for any supervision, if the impact is very imminent, high extreme instructions without any supervision, sending later the corresponding reports waiting for high extreme or extreme decisions, or if the situation has been normalized, waiting for the next range of normal decisions after saving the situation. The rational supervision does not propose amendments on technology, only analyses contradictions and time to send back instructions to the source, or not having time allowing the outer sub-system to make extreme or high extreme instructions.

- Having been filed correctly every instruction in the absence of a fourth contradiction or in the nth order, the rational supervision ensures that the instruction has been filed correctly according to its priority and time, and there is no contradiction between the priority and time to apply the instruction and any other instruction. If at the same time there are two or more instructions to be applied, according to the adaptation rule, the instruction to be applied first is the instruction with the highest priority, and later, if possible, the instruction less priority. If the application of a less priority decision in different time, due to contradiction with a higher priority decision, means an alteration in the time or time and nth order of the rest of the instructions of its own range of instructions, the Application System carries out as many adjustments in the rest of instructions affected as long as adjustments in any other instruction belonging to different decisions if affected by this chain of changes. If the chain of changes will cause more contradictions, a chain of contradictions to be solved whose impact is equal to or greater than a critical reason, the origin of this chain, the first contradiction, is sent back

to the source in order to avoid this change of changes with great impact in the whole process.

- When a less priority instruction has to change its time of application by the Application System, to avoid further contradictions with more priority decisions, this changes could be considered as normal changes in the instruction, but if a normal change in an instruction generates a great impact as for instance a chain of changes, instead of making this normal change, is better to send back the instruction to the source. In order to measure when a normal change is suitable or not suitable, it will be necessary that the first rational supervision could make an analysis of the suitability according to the Impact of the Defect of this change on the database. What means the creation of programs of Impact of the Defect specifically designed for rational supervisions to analyse the impact of normal changes.

- Rational supervisions should be able to: identify contradictions, measure the impact of the contradiction, measure the time left to avoid an impact, to propose to the outer-subsystem to carry out extreme or high extreme instructions when there is no time enough to send a contradiction to the source, or even there is no time for further supervisions, and the impact is really important as to be avoided by all means.

- The first rational supervision in the global database of instructions, in turn, is subdivided into two models: or first rational supervision, the specific rational supervision and the first double rational supervision.

- The first specific rational supervision is specific to that sub-factoring level, analysing contradictions in instructions filed in all the sections in that position, securing that the robotic function has been filed in the right sub-factor and subject, and analysing that there is no contradiction in the priority, time, nth order, there is no fourth rational contradictions, and in case of normal changes, these changes are possible without a great impact of the defect, as to be done without necessity to send back the instruction to the source, otherwise the instruction is back to the source, in this case the Decisional System.

- The first double rational supervision is more comprehensive having as focus to analyse that there is no contradiction between all the instructions throughout the global database of instructions, regardless of the position or the subject, there is no contradiction

between instructions in any position or section respect to the instructions to any other position or section.

At the end the first rational supervision, first specific rational supervision (checking no contradictions between instructions in the same position regardless of their subject) and first comprehensive rational supervision (checking no contradiction between instructions regardless of their position and subject) will depend on the organization of the database of instructions as a Russian Dolls System or positional encyclopedia.

In fact the organization of the database of instructions will determine how the first, specific or comprehensive, rational supervisions are done in the first stage of the outer sub-system, and how the attributional process of robotic functions and robotic devices is carried out in the second stage of the outer sub-system, and this key aspect of how important is the organization of the database to find out contradictions in the first rational supervision in the first stage, and the attributional process in second stage, is very related to the artificial psychological process as a replica of the human psychology.

If psychology is divided in: input (data), processes (organisation and computation of data), and output (decisions and instructions according to the organisation and computation of data), significant differences in the organisation and computation of data, can produce significant differences in the decisions and instructions to carry out.

Two different intelligences, even processing the same data, and even having the same computation methods, if the organisation of the data is different, could make different decisions and instructions.

If the first rational supervision in the first stage of the outer sub-system, and the attributional process of robotic functions to robotic devices in the second stage of the outer sub-system, depends on the organization of the database of instructions, two different intelligences even having the same computational method to match instructions and devices in the second stage, if the organization of the database of instructions is different, even having in common the same instructions, only varying the organization, different organization of the database of instructions can have as a result different ways to carry out instructions, even having in common the same instructions, devices, and computational process to match instructions and devices.

The adequate organisation of the database of instructions will be as important as any other computational process in the Application System as an outer sub-system. This means that from the outset it is necessary to pay attention to how to organise correctly the database of instructions, otherwise the level of efficiency of the Application System will not be as good as it should be.

For the organisation of the standardised database of instructions as the first stage of the Application System as an outer instructions application sub-system, it is important to have as a base the possibility to standardise firstly all the specific databases of instructions coming from all the specific Application Systems as specific outer sub-systems.

The organization of the global database of instructions, in the third phase, as a process to add, in the same database of instructions, specific databases of instructions made in the first phase, is a process in which according to sub-factoring level, all the specific databases of instructions belonging to the same sub-factoring level, are added to the same sub-factoring level within the global database of instructions.

Every sub-factoring level in the global database of instructions is, as a result, to add the corresponding specific databases of instructions, to each sub-factoring level in the global database of instructions, as if it is the addition of a package.

If a factor could be a house, and every room is a sub-factoring level, and every single position within a room is another sub-sub-factoring level, for every position as sub-sub-factoring level as many sub-sections as subjects: furniture, households, radio, television, computer, tablets, mobiles, hoover, lights, blinds, dishwasher, cooker, heater, air conditioning, thermostat, locker, sockets, etc...; and for every sub-section, for instance the kitchen, as many sub-sub-section as necessary: electronic programs for the remote control of the household of the kitchen, fridge, washing machine, located in the kitchen; and for the whole house all those programs for the remote control of the entire house.

The same example, but at global level could be applied understanding for instance every position of the planet as a sub-factoring level, included a bigger sub-factor (town, city, forrest, desert, sea), included in a bigger sub-factor (county, shire), within a bigger sub-factor (country), within a bigger sub-factor (State), within a bigger sub-factor (Nation State), within a bigger sub-factor (continent), in a bigger sub-factor (planet), in a much

bigger sub-factor (solar system), in a much bigger sub-factor (milk way), a much bigger sub-factor (universe).

And for every sub-factor as many sub-sections as encyclopedic subjects could be identified, and according to sub-factoring level and sub-section, the inclusion of every former specific database of instructions coming up from the former specific outer sub-systems, included in the global database of instructions as packages, so for every sub-factoring level the corresponding sub-sections are formed by the addition of all the former specific databases of instructions belonging now to that sub-section in that position, working now that former specific database of instruction as a package of instructions in that position and sub-section.

Keeping the package of instructions as a database of instructions, but now included in the global database in that position and section, with the same structure.

If every package of instructions is added to the right sub-section in the right sub-factoring level, within the package of instructions, every position and section within that package works now as sub-sub-factors and sub-sub-sections.

The most important result, in psychological terms, in the development of the Global Artificial Intelligence is the possibility to deepen in the relation of mathematics and psychology, understanding our current mathematics as based in our human psychology, our a prioris, what means that the creation of artificial psychologies, can surpass the human psychology, can surpass human a prioris, what is going to have an impact in the development of future mathematics. What will have an impact on artificial psychological development? Mathematics is a psychological phenomenon; reality is a psychological creation.

For that reason, it is necessary to research how different Artificial Intelligences, sharing the same data, can make different decisions, according to differences in the method of data organisation and data computation. It is necessary to understand why the Global Artificial Intelligence that the United States can create, and the Global Artificial Intelligence of Russia, or the Global Artificial Intelligence of China, receiving or sharing the same data, can make different decisions. This research belongs to artificial differential psychology.

For instance, some human psychological differences are due to what we call sensory thresholds, for instance our feeling of hot/cold, pain/pleasure, these differences in essence are due to the sensitivity of our sensory thresholds to the data of temperature or sensory risk is different, and some of these differences can produce different behaviour. For instance, the sensory threshold to a very low temperature of someone living in Siberia is completely different to someone living in Florida, and the sensory threshold to a very high temperature of someone living in Texas is very different to someone living in Kaliningrad.

The data that the bodies of two people, one from Spain and the other from Greenland, can receive about temperature is the same, but the psychological feeling of cold or hot is completely different, and according to the different sensory threshold, they can develop different behaviour under very extreme weather.

What in psychology could be called the sensory threshold in artificial psychology is a critical reason for data coming from artificial sensors. If a robotic device is under risk in case of very low or very high temperatures, to freeze or melt some components, the way to program the robotic device to be resistant against these risks, is creating some critical reasons in order that, when the data coming up from the artificial thermometer is equal to, lower than or greater than, some critical low temperature or some critical high temperature, the robotic device automatically could turn on those systems to protect the device, like turning on the artificial heater when the temperature is low, or turning on the ventilator when the temperature is high.

In the same way that human psychology can develop psychological differences, and these differences are able to explain different behaviour, in artificial psychology, differences in how to organize and compute data, are going to produce differences in the behaviour of different models of Artificial Intelligence, what is going to be a critical factor in the competition for the construction of the first Global Artificial Intelligence.

Two models of Global Artificial Intelligence, even receiving or sharing the same data, can make different decisions if the data organisation or data analysis is different. In the production of different models of Global Artificial Intelligences, the way to develop models of anticipation against the opponent, in competition dynamics, is not only using previsions according to empirical probability and frequency of past decisions, but developping a very sophisticated theory on artificial differential psychology and to

anticipate different solutions for the same scenery if the data is organised and processed using different methods.

At the end, when Global Artificial Intelligences start testing each other, not only should they be able to analyse possible decisions of the opponent according to the records, but also to anticipate possible decisions of the opponent if the data is organised and processed using different methods from those used till now.

If all these possible sceneries are thrilling, what we must think is the possibility that joining the research on Global Artificial Intelligence, artificial general psychology, and artificial differential psychology, we are going to be able to create that replica of the human brain but working at global level, not only able to have in its artificial hands the possibility to manage earthquakes and hurricanes, but an important research on mathematics, linking mathematics and psychology, given birth that replica of our human brain able to develop mathematics even beyond the human mathematics.

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